



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,979	02/18/2005	Hiroshi Takemori	Watanabe-2(FP308US)	1725
7265 7590 12/18/2006 MICHAELSON & ASSOCIATES P.O. BOX 8489 RED BANK, NJ 07701			EXAMINER KIM, ALEXANDER D	
			ART UNIT	PAPER NUMBER
			1656	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
31 DAYS		12/18/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/524,979

Applicant(s)

TAKEMORI ET AL.

Examiner

Alexander D. Kim

Art Unit

1656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-72 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Application Status***

1. By virtue of a preliminary amendment filed on 02/18/2005, claims 1-11 are pending in the instant application.

### ***Restrictions***

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

- I. Claims 1-3, 10-11, 15-18, and 55-60 drawn to a polypeptide related to SEQ ID NO: 2 (encoded by SEQ ID NO: 1).
- II. Claims 1-3, 10-11, 15-18, and 55-60 drawn to a polypeptide related to SEQ ID NO: 4 (encoded by SEQ ID NO: 3).
- III. Claims 1-3, 10-11, 15-18, and 55-60 drawn to a polypeptide related to SEQ ID NO: 6 (encoded by SEQ ID NO: 5).
- IV. Claims 1-3, 10-11, 15-18, and 55-60 drawn to a polypeptide related to SEQ ID NO: 8 (encoded by SEQ ID NO: 7).
- V. Claims 1-3, 10-11, 15-18, and 55-60 drawn to a polypeptide related to SEQ ID NO: 10 (encoded by SEQ ID NO: 9).

Art Unit: 1656

- VI. Claims 1-3, 10-11, 15-18, and 55-60 drawn to a polypeptide related to SEQ ID NO: 12 (encoded by SEQ ID NO: 11).
- VII. Claims 4-9, 12, 19-22, 66-68 and 71 drawn to a polynucleotide, host cells related to SEQ ID NO: 1 (encoding SEQ ID NO: 2).
- VIII. Claims 4-9, 12, 19-22, 66-68 and 71 drawn to a polynucleotide, host cells related to SEQ ID NO: 3 (encoding SEQ ID NO: 4).
- IX. Claims 4-9, 12, 19-22, 66-68 and 71 drawn to a polynucleotide, host cells related to SEQ ID NO: 5 (encoding SEQ ID NO: 6).
- X. Claims 4-9, 12, 19-22, 66-68 and 71 drawn to a polynucleotide, host cells related to SEQ ID NO: 7 (encoding SEQ ID NO: 8).
- XI. Claims 4-9, 12, 19-22, 66-68 and 71 drawn to a polynucleotide, host cells related to SEQ ID NO: 9 (encoding SEQ ID NO: 10).
- XII. Claims 4-9, 12, 19-22, 66-68 and 71 drawn to a polynucleotide, host cells related to SEQ ID NO: 11 (encoding SEQ ID NO: 12).
- XIII. Claims 13-14 and 23-27, drawn to an antibody having an affinity for a polypeptide related to SEQ ID NO: 2 and a hybridoma producing the antibody.
- XIV. Claims 13-14 and 23-27, drawn to an antibody having an affinity for a polypeptide related to SEQ ID NO: 4 and a hybridoma producing the antibody.

Art Unit: 1656

- XV. Claims 13-14 and 23-27, drawn to an antibody having an affinity for a polypeptide related to SEQ ID NO: 6 and a hybridoma producing the antibody.
- XVI. Claims 13-14 and 23-27, drawn to an antibody having an affinity for a polypeptide related to SEQ ID NO: 8 and a hybridoma producing the antibody.
- XVII. Claims 13-14 and 23-27, drawn to an antibody having an affinity for a polypeptide related to SEQ ID NO: 10 and a hybridoma producing the antibody.
- XVIII. Claims 13-14 and 23-27, drawn to an antibody having an affinity for a polypeptide related to SEQ ID NO: 12 and a hybridoma producing the antibody.
- XIX. Claims 28-29 and 30-31, drawn to a method for treatment using the polypeptide according to Group I.
- XX. Claims 28-29 and 30-31, drawn to a method for treatment using the polypeptide according to Group II.
- XXI. Claims 28-29 and 30-31, drawn to a method for treatment using the polypeptide according to Group III.
- XXII. Claims 28-29 and 30-31, drawn to a method for treatment using the polypeptide according to Group IV.
- XXIII. Claims 28-29 and 30-31, drawn to a method for treatment using the polypeptide according to Group V.

Art Unit: 1656

- XXIV. Claims 28-29 and 30-31, drawn to a method for treatment using the polypeptide according to Group VI.
- XXV. Claims 32-33, 36, 38 and 53-54, drawn to a method for screening a modulator of the polypeptide of Group I.
- XXVI. Claims 32-33, 36, 38 and 53-54, drawn to a method for screening a modulator of the polypeptide of Group II.
- XXVII. Claims 32-33, 36, 38 and 53-54, drawn to a method for screening a modulator of the polypeptide of Group III.
- XXVIII. Claims 32-33, 36, 38 and 53-54, drawn to a method for screening a modulator of the polypeptide of Group IV.
- XXIX. Claims 32-33, 36, 38 and 53-54, drawn to a method for screening a modulator of the polypeptide of Group V.
- XXX. Claims 32-33, 36, 38 and 53-54, drawn to a method for screening a modulator of the polypeptide of Group VI.
- XXXI. Claim 34, drawn to a method for screening a modulator using the vector of Groups VII.
- XXXII. Claim 34, drawn to a method for screening a modulator using the vector of Groups VIII.
- XXXIII. Claim 34, drawn to a method for screening a modulator using the vector of Groups IX.
- XXXIV. Claim 34, drawn to a method for screening a modulator using the vector of Groups X.

Art Unit: 1656

- XXXV. Claim 34, drawn to a method for screening a modulator using the vector of Groups XI.
- XXXVI. Claim 34, drawn to a method for screening a modulator using the vector of Groups XII.
- XXXVII. Claims 35, drawn to a method of screening for binding partners using the polypeptide of Group I.
- XXXVIII. Claims 35, drawn to a method of screening for binding partners using the polypeptide of Group II.
- XXXIX. Claims 35, drawn to a method of screening for binding partners using the polypeptide of Group III.
- XL. Claims 35, drawn to a method of screening for binding partners using the polypeptide of Group IV.
- XLI. Claims 35, drawn to a method of screening for binding partners using the polypeptide of Group V.
- XLII. Claims 35, drawn to a method of screening for binding partners using the polypeptide of VI.
- XLIII. Claim 37, drawn to a method of screening for modulators of expression using the polynucleotide Groups VII.
- XLIV. Claim 37, drawn to a method of screening for modulators of expression using the polynucleotide Groups VIII.
- XLV. Claim 37, drawn to a method of screening for modulators of expression using the polynucleotide Groups IX.

Art Unit: 1656

- XLVI. Claim 37, drawn to a method of screening for modulators of expression using the polynucleotide Groups X.
- XLVII. Claim 37, drawn to a method of screening for modulators of expression using the polynucleotide Groups XI.
- XLVIII. Claim 37, drawn to a method of screening for modulators of expression using the polynucleotide Groups XII.
- XLIX. Claim 53, drawn to a pharmaceutical composition that is a modulator.
  - L. Claims 61-65 and 69, drawn to a kit for screening a compound capable of promoting or inhibiting the activity of protein.
  - LI. Claim 72, drawn to an antisense nucleotide complementarily binding to the polynucleotide of Group I.
  - LII. Claim 72, drawn to an antisense nucleotide complementarily binding to the polynucleotide of Group II.
  - LIII. Claim 72, drawn to an antisense nucleotide complementarily binding to the polynucleotide of Group III.
  - LIV. Claim 72, drawn to an antisense nucleotide complementarily binding to the polynucleotide of Group IV.
  - LV. Claim 72, drawn to an antisense nucleotide complementarily binding to the polynucleotide of Group V.
  - LVI. Claim 72, drawn to an antisense nucleotide complementarily binding to the polynucleotide of Group VI.



LVII. Claims 39-52 and 70, drawn to a method for screening a modulator of a protein with auto-phosphorylating ability by antibody-binding step.

3. The inventions listed as Groups I-LVII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The inventions are linked by the technical feature of a polypeptide of SEQ ID NO: 2. However, this technical feature is not special because it does not constitute an advance over the prior art. Horike et al. (2003 May 16, The Journal of Biological Chemistry, vol. 278, p. 18440-18447, as cited in IDS) teaches a polypeptide identical to the instant SEQ ID NO: 2. Group I-VI are polypeptides having distinct structure with different SEQ ID NOs. Group VII-XII are polynucleotide having distinct structure with by different SEQ ID NOs. Group XVIII is an antibody and hybridoma producing the antibody. Group XIX-XXIV are a method for treatment using the polynucleotide of Group I-VI, respectively. Group XXV-XXX are a method for screening a modulator of the polynucleotide of Group I-VI, respectively. Group XXXI-XXXVI are a method for screening modulator using the vector of group VII-XII, respectively. Group XXXVII-XLII are a method of screening for binding partners using polypeptides of Group I-VI, respectively. Group XLIII-XLVIII are a method of screening for modulator of expression using polynucleotides of Group VII-XII, respectively. Group XLIX is a pharmaceutical composition comprising a modulator. Group L is a screening kit for a compound that affects the activity of a protein. Group LI-LVI are antisense nucleotides complementarily binding to polynucleotide of Group

VII-XII, respectively. Group LVII is a method for screening comprising a phosphorylating steps, an antibody-binding step and a measuring step. Each product of Group II-XVIII and XLIX-LVI are product with distinct structure and function compared to the polypeptide of Group I. The method of Group XIX has method step of using the polypeptide of Group I which is distinct from methods of Group XX-XLVIII and LVII. Group XX-XLVIII and LVII are methods with distinct method steps from each other, which do not require the polypeptide of Group I.

#### ***Election***

4. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions

Art Unit: 1656

unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### **Notice of Possible Rejoinder**

5. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not

Art Unit: 1656

commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Art Unit: 1656

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander D. Kim whose telephone number is (571) 272-5266. The examiner can normally be reached on 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr can be reached on (571) 272-0931. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alexander Kim  
November 14, 2006

  
**KATHLEEN M. KERR, PH.D.**  
SUPERVISORY PATENT EXAMINER